REMARKS

Claims 1, 3, 5-8, and 10-14 remain pending in the application, and independent claims 1, 3, and 8 are amended herein. Applicants thank the Examiner for participating in the telephone interview on February 29, 2008. As further described below, the claims have been amended in accordance with the discussions during the interview.

Favorable reconsideration is requested in view of the claim amendments and following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

Overview of the Claim Amendments

Claims 1, 3, 5-8, and 10-14 are pending in the application. Similar to the previous Office Actions, the claims stand rejected under 35 U.S.C. §103(a) as being obvious based on the combination of Totterdell, European Patent Application 0 028 067 (Totterdell), and Ohsugi et al., U.S. Patent No. 4,955,213 (Ohsugi), by themselves or in combination with various tertiary references.

In summary, Applicants have amended the independent claims in two ways. First, the claims have been amended to recite more clearly the configuration of the control portion to clarify its structural nature in response to the Examiner's comments that the features of the control portion are not structural. Second, the claims have been amended to recite a specific calculation of the claimed "prescribed time period". The prescribed time period is set in this manner so as to minimize the time period of the water level detection, thereby saving power. The amendments regarding the calculation of the prescribed time period are supported in the specification at least at page 14, lines 4-26.

As background, on January 30, 2008, Applicant filed an RCE containing claim amendments. In the prior Advisory Action, the Examiner had commented that "configured" language was not used in connection with the control portion, suggesting that she regarded the aspects of the control portion as functional, not structural. Applicants, therefore, amended the claims in the RCE to recite "configured" language

more explicitly. In addition, the previous version of the claims referred only to water level detection "when said washing is completed". In the Advisory Action, the Examiner interpreted "washing" to exclude other portions of a wash cycle (e.g., rinsing and draining), contrary to the manner in which the term is used in the application. Applicants, therefore, amended the claims to recite that water level detection occurs after the entire wash cycle is completed (including rinsing and draining).

On February 29, 2008, the Examiner participated in a telephone interview to discuss the claims as submitted in the RCE. The Examiner indicated, however, that she still regarded the claims as not being patentable over the cited prior art. As the discussions proceeded, it became apparent that the Examiner was still affording limited patentable weight to manner in which the control portion was claimed. More specifically, the Examiner seemed not to be affording patentable weight to the precise configuration of the control portion as recited in the claims. In addition, the Examiner felt that the "prescribed time period" was being recited too broadly, and may have more patentable weight if narrowed to a more specific mathematical operation or formula.

Although Applicants suggested claim amendments during the interview, which were discussed, the Examiner would not permit the submission of a supplemental amendment prior to issuing the current Office Action. The current Office Action, therefore, is not based upon what was discussed during the interview and contains similar rejections to previous Office Actions. Applicants, therefore, believe that the current bases for rejection are largely moot in view of the interview and the claim amendments submitted in this response.

In accordance with the Examiner's comments (although Applicants recognize that the Examiner did not commit to favorable consideration of particular claim language), independent claims 1, 3, and 8 have been amended. First, these claims have been amended to clarify the structural nature and configuration of the control portion. Specifically, the claims have been amended to recite: "said control portion being configured[,] to recognize when said wash cycle is completed, and upon such recognition to cause said water level detecting unit to detect water level in said water

tank only for a prescribed time period. . ." Because the claimed control portion has a particular configuration, it is structurally different from other controllers having different configurations, such as the controllers described in the references.

In the current Office Action (and previous Office Actions), the Examiner essentially has taken the position that a generic controller discloses the features of the claimed controller merely because any controller is "capable" of being configured as claimed. (See, e.g., Office Action at paragraphs 5 and 7; page 10 lines, 3-8; page 11, lines 9-14; page 15, lines 12-17.) Applicant disagrees with this analysis. The Examiner's position is analogous to saying a claimed computer programmed in a particular fashion is disclosed by *any computer* simply because a generic computer is capable of being programmed as claimed. Such an analysis would be incorrect. Accordingly, the configuration of the controller as recited in the current claims is structural in nature, and to reject the claims the references must disclose or render obvious the controller as *configured in the claims*. As shown below, Totterdell and Ohsugi, whether individually or in combination, do not disclose or render obvious the controller having the claimed configuration. The claims, therefore, are patentable.

In addition, in accordance with the Examiner's comments, the independent claims have been amended to recite a particular manner by which the claimed "prescribed time period" is determined. Specifically, these claims have been amended to recite: "a prescribed time period ~~set in accordance with a time period calculated from~~ substantially equaling a smallest amount of water detectable by said water level detecting unit divided by a minimum flow rate of water fed from said water feed unit. . ." By "substantially equaling" a smallest amount of water detectable divided by a minimum flow rate, Applicants refer to minor adjustments that may be made for component variations, as described in the specification. For instance, the specification describes an example in which the minimum flow rate is 0.3 L/min and the smallest detectable water level is 3L, resulting in a calculated prescribed time period of 10 min. (Specification at page 14, lines 13-17.) This calculated time prescribed time period may be adjusted to 15 min to account for component variations to ensure proper monitoring. (Specification at page 14, lines 18-19.) As further described below, neither Totterdell

nor Ohsugi disclose detecting a water level for a prescribed time period as now claimed.

Analysis of the Cited References

The primary references of Totterdell and Ohsugi, whether individually or in combination, do not disclose or suggest the claim features of a control portion being configured to recognize when said wash cycle is completed, and upon such recognition, to cause said water level detecting unit to detect water level in said water tank only for a prescribed time period substantially equaling a smallest amount of water detectable by said water level detecting unit divided by a minimum flow rate of water fed from said water feed unit.

Totterdell teaches monitoring the water level during the draining operation rather than at the end of the wash cycle. (See, e.g., page 2, line 24 to page 3, line 20.) In the passage previously relied upon by the Examiner, Totterdell states: "At the end of the wash/rinse part of the programme, a 'pump-out' signal is applied to controller 10 to energise the drain pump 6. This signal also starts a timer 18 within the controller 10. During this period controller 10 monitors the switch 12 and if the latter does not close during the time period of timer 18, this indicates that the filter is blocked and a register 19 is set." (Page 5, lines 18-24, emphasis added.)

Thus, although there is a reference in Totterdell to monitoring "at the end of the wash/rinse part of the programme", water level monitoring, as described in this passage, is occurring during draining insofar as a "pump-out signal is applied to controller 10 to energise the drain pump 6." Thus, the water level is monitored while the drain pump is energized, *i.e., during draining.* Water level detection does not occur at the end of the entire wash *cycle*, which would include after draining, but only after the "wash/rinse part of the programme". This differs from the claimed invention in which the residual water level is monitored after even the drain part of the cycle is completed.

In this vein, Totterdell is concerned with detecting a blockage which may prevent appropriate draining. In contrast, the claimed invention is concerned with detecting a leakage from the water feed unit into the drum. Because Totterdell is not concerned

with detecting leakage from the water feed unit, it does not teach or suggest monitoring the water level based on a minimum flow rate of the water feed unit. There also is no need in Totterdell to monitor the water level once the draining portion of the cycle is complete to detect a drain blockage.

Based on the above, the controller in Totterdell is not configured, as now claimed, to recognize when the wash cycle is completed, and upon such recognition, to cause said water level detecting unit to detect water level in said water tank only for a prescribed time period. Totterdell teaches monitoring the water level only during draining, and therefore water level monitoring is not tied to the end of the wash cycle. In addition, in Totterdell the time period of water level monitoring also is based upon the draining cycle. Totterdell, therefore, does not disclose monitoring the water level for the claimed prescribed time "substantially equaling a smallest amount of water detectable by said water level detecting unit divided by a minimum flow rate of water fed from said water feed unit". Indeed, the Examiner recognizes that Totterdell does not teach water level detection for a prescribed time period at all. (See Office Action at page 9, lines 6-8.) The controller of Totterdell, therefore, is not configured in a manner comparable to the claimed controller.

A combination of Totterdell with Ohsugi does not result in or disclose the claimed invention. Ohsugi discloses a conventional auto shutoff that shuts off the power after an arbitrary time after the wash cycle. Accordingly, although a controller in Ohsugi may be able to recognize when the wash cycle is completed, Ohsugi does not disclose or suggest, as now claimed, a controller that, upon such recognition, is configured to cause a water level detecting unit to detect water level in the water tank. Indeed, Ohsugi does not disclose water level detection for the purpose of detecting leakage at the water feed unit. Ohsugi merely teaches water level detection to ensure that the tub is filled to the correct amount during filling. (Ohsugi at col. 3, lines 62-64.) Water level detection thus is not based upon a prescribed time period as claimed. In addition, the shutoff in Ohsugi occurs an arbitrary time after that wash cycle is complete (e.g. five minutes). The auto shutoff does not activate after a prescribed time, as claimed, substantially equaling a smallest amount of water detectable by a water level detecting

unit divided by a minimum flow rate of water fed from a water feed unit.

Accordingly, Totterdell and Ohsugi each lack several features recited in amended independent claims 1, 3, and 8. In addition, a combination of Totterdell and Ohsugi does not result in or disclose the claimed invention. Totterdell teaches water level detection during draining, and Ohsugi teaches water level detection during tub filling. The references, therefore, whether individually or in combination, do not disclose or teach a controller "configured to recognize when said wash cycle is completed, and upon such recognition to cause said water level detecting unit to detect water level in said water tank". In addition, the Examiner recognizes that Totterdell does not teach water level detection for a prescribed time period at all. In addition, in Ohsugi water level detection is based on the rising water level in the tub during filling, and not a prescribed time. The references, therefore, whether individually or in combination, do not disclose or teach a controller additionally configured to cause the claimed water level detection for a "prescribed time period". In addition, to the extent Ohsugi teaches that power may be shut off after a set time period after the wash cycle is completed, the time period is arbitrary. Ohsugi does not disclose or suggest water level detection for a "prescribed time period substantially equaling a smallest amount of water detectable by said water level detecting unit divided by a minimum flow rate of water fed from said water feed unit".

Accordingly, for at least these reasons a combination of Totterdell and Ohsugi does not result in, disclose, or suggest the claimed invention. The dependent claims are non-obvious for at least the same reasons. The tertiary references cited against the dependent claims do not supply the deficiencies of Totterdell and Ohsugi, and the Examiner does not indicate otherwise. Accordingly, the rejection of all claims should be withdrawn.

Conclusion

For at least the foregoing reasons, claims 1, 3, 5-8, and 10-14 are believed to be allowable, and the application is believed to be in condition for allowance. A prompt action to such end is respectfully requested.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Respectfully submitted,

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